

### **REMARKS**

Claims 1-15, as amended, and new claims 22-27 are pending in this application. In this Response, Applicant has amended certain claims. In light of the Office Action, Applicant believes these amendments serve a useful clarification purpose, independent of patentability. Accordingly, Applicant respectfully submits that the claim amendments do not limit the range of any permissible equivalents.

In particular, claim 1 has been rewritten to include the features previously recited in canceled claim 2. Dependent claim 3 has been amended to depend from claim 1 in light of the cancellation of claim 2. In addition, independent claim 11 has been rewritten to further clarify the present invention. Furthermore, dependent claims 6 and 13 have been rewritten to satisfy the Examiner's § 112 concerns. Finally, claims 22-27 have been added to recite additional embodiments of the invention fully supported by the present Specification as follows:

| <u>Claim</u> | <u>Support</u>  |
|--------------|---|
| 22           | Original claims 1 & 11, Specification at Page 17, lines 19-26 |
| 23 - 24      | Specification at Page 17, lines 19-26                         |
| 25           | Specification at Page 17, lines 12-26                         |
| 26           | Specification at Page 15, lines 19-26                         |
| 27           | Specification at Page 14, line 25 to Page 15, line 16         |

As no new matter has been added by the amendments herein, Applicant respectfully requests entry of these amendments at this time.

### **RESTRICTION REQUIREMENT**

In response to the Restriction Requirement imposed by the Examiner, the Applicant hereby confirms election of Group I (claims 1-15) for prosecution in this application. As a result of the present claim cancellations and additions, however, Group I now includes claims 1-15 and 22-27. In light of the cancellation of claims 16-21, Applicant respectfully submits that the Restriction Requirement is moot.

### **THE REJECTIONS UNDER 35 U.S.C. § 112**

Claims 6 and 13 were rejected under 35 U.S.C. § 112, second paragraph, for the reasons stated on page 3 of the Office Action. In response to the rejection and amendments

to the independent claims, Applicant has amended claims 6 and 13 to depend from claims 1 and 11, respectively.

In view of these amendments, Applicant believes that the § 112 rejection is resolved. As such, Applicant respectfully requests reconsideration and withdrawal thereof.

### **THE REJECTIONS UNDER 35 U.S.C. §§ 102 and 103**

Claims 1 and 7-15 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,730,663 to Tanaka *et al.* for the reasons set forth on page 3 of the Office Action. In addition, claims 1 and 7-15 were rejected under § 102(a) as anticipated by or, in the alternative, as obvious over Japanese Patent No. 8322962 for the reasons stated on page 4 of the Office Action. Finally, claims 1, 7-9 and 11-15 were rejected under § 102(b) as anticipated by or, in the alternative, under § 103(a) as obvious over U.S. Patent No. 5,253,871 to Viollaz for the reasons discussed on page 4 of the Office Action.

#### **Tanaka and Japanese Patent No. 8322962**

Tanaka generally discloses a solid golf ball with an inner and outer cover layer made of a resinous composition consisting mainly of ionomer resin. *See* Abstract. Thus, the outer cover layer is thermoplastic in nature. In contrast, claim 1 of the present invention has been amended to further define the outer cover layer of the golf ball to be a thermoset polymer. Tanaka is completely silent as to thermoset outer covers as presently recited in independent claim 1. As such, Tanaka does not anticipate or render obvious claim 1.

In addition, while Tanaka teaches that additional materials may be mixed with the ionomer, *e.g.*, polyolefins and polyamides, the reference instructs that the amount to be added should not exceed 10 percent based on the weight of the composition. *See* Col. 4, lines 34-38. In contrast, independent claim 11 now recites that the polyamide is present in the composition in an amount of about 90 percent to about 20 percent, which well exceeds the amount of polyamide taught by Tanaka. Thus, Tanaka *teaches away* from the amounts of polyamide now recited in claim 11.

As the Examiner stated in the Office Action, JP 8322962 is an equivalent of Tanaka. *See* Office Action at Page 4. In light of this equivalence, like Tanaka, JP 8322962 does not disclose or suggest the invention recited in independent claims 1 and 11, and those depending therefrom.

For the reasons above, Applicant respectfully submits that independent claims 1 and 11 are not anticipated or rendered obvious by Tanaka or JP 8322962. As such, Applicant respectfully requests reconsideration and withdrawal of the §§ 102 and 103 rejections based thereon.

Viollaz

Viollaz generally discloses the use of an ether block copolymer, optionally blended with an ionomer, for use as the middle layer of a three layer golf ball. *See* Abstract. Similar to the Tanaka ball, the outer cover layer of the Viollaz golf ball is a thermoplastic material. *See* Col. 4, lines 1-3. Because independent claim 1 now recites that the cover is a thermoset material, Viollaz does not anticipate claim 1. In addition, a skilled artisan would not have been motivated to modify Viollaz's disclosed thermoplastic cover materials without the impermissible use of hindsight. Thus, Applicant respectfully submits that Viollaz does not disclose or suggest the invention presently recited in claim 1.

With regard to independent claim 11, Viollaz teaches an intermediate layer formed from a composition including a block copoly(amide-ether) and an ionomer. *See* Col. 2, lines 65-67. An example of a block copoly(amide-ether) suitable for use in the Viollaz intermediate layer is a PEBAX® (Col. 2, lines 1-8), which is formed by reacting a polyamide that has been end-capped to form an  $\alpha,\omega$ -dicarboxylic copolyamide with a dihydroxy-terminated polyether (Specification at Page 4, lines 12-16). In other words, the block copoly(amide-ether) includes an ether segment and an amide segment.

In contrast, claim 11 now recites that the intermediate layer is formed of a composition including at least one ionomer and at least one polyamide polymer, with the proviso that the at least one polyamide polymer is not a block polyamide copolymer including main-chain polyether blocks. Therefore, claim 11 specifically excludes the polyamide material taught by Viollaz. Furthermore, Viollaz does not even suggest using block copolymers without main-chain ether polyether blocks to achieve the stated objective of a golf ball with excellent feel, initial high speed, and low deformation at impact (Col. 2, lines 14-19). As such, Applicant respectfully submits that Viollaz does not disclose or suggest the invention presently recited in claim 11.

For the reasons above, Applicant respectfully submits that Viollaz does not anticipate or render obvious the present invention, as now recited in independent claims 1 and 11, and those depending therefrom. Therefore, Applicant respectfully requests reconsideration and withdrawal of the §§ 102 and 103 rejections based thereon.

### **THE DOUBLE PATENTING REJECTION**

Claims 1-15 were rejected under the judicially created doctrine of obviousness-type double patenting as being obvious over claims 1-22 of the U.S. Patent No. 6,353,058. Applicant submits herewith a Terminal Disclaimer in compliance with 37 CFR 1.321(c). Thus, Applicant respectfully requests reconsideration and withdrawal of the double patenting rejection.

### **NEW CLAIMS ADDED IN THIS RESPONSE**

As briefly mentioned above, claims 22-27 have been added with this Response to recite additional embodiments of the present invention. For similar reasons as detailed above with respect to claims 1 and 11, independent claim 22, and those depending therefrom, is not disclosed or suggested by the cited references.

For example, claim 22 recites that the polyamide polymer is included in the intermediate layer composition in an amount of about 90 percent to about 20 percent by weight of the composition. As discussed above, both Tanaka and JP 8322962 *teach away* from adding polyamide in an ionomer composition in an amount greater than 10 percent by weight of the composition. *See* Col. 4, lines 34-38.

In addition, claim 22 excludes block polyamide copolymers including main-chain polyether blocks from the intermediate layer composition. Viollaz, on the other hand, provides no examples of block copolymers for incorporation into an intermediate layer blend other than block copoly(amide-ethers).

Thus, none of the cited references disclose or even suggest the invention recited in claims 22-27.

### **CONCLUSION**

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicant invites the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Fee Sheet Transmittal is submitted herewith to pay for the Terminal Disclaimer.  
No other fees are believed to be due at this time. Should any fee be required, however, please  
charge such fee to Swidler Berlin Shereff Friedman, LLP Deposit Account No. 195127,  
Order No. 20002.0220.

Respectfully submitted,

SWIDLER BERLIN SHEREFF FRIEDMAN, LLP

Dated: September 10, 2003

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## IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A golf ball comprising:  
a core;  
a cover comprising a non-ionomeric polymer material comprising a thermoset polymer; and  
an intermediate layer disposed between the core and the cover, wherein the intermediate layer comprises a polymer composition comprising at least one ionomer and at least one polyamide polymer.
2. (Canceled) The golf ball of claim 1, wherein the non-ionomeric polymer material comprises a thermoset polymer.
3. (Currently Amended) The golf ball of claim 1 ~~claim 2~~, wherein the thermoset polymer comprises a functionalized thermoset polymer, a thermoset copolymer, a functionalized thermoset copolymer, or mixtures thereof.
4. (Original) The golf ball of claim 3, wherein the thermoset polymer comprises polyurethane.
5. (Original) The golf ball of claim 3, wherein the thermoset polymer comprises polyurea.
6. (Currently Amended) The golf ball of claim 1 ~~claim 3~~, wherein the thermoset polymer comprises transpolyisoprene.
7. (Original) The golf ball of claim 1, wherein the ionomer comprises homopolymers or copolymers of olefin, polyester, copoly(ether-ester), copoly(ester-ester), polyamide, polyimide, polyether, polyurethane, polyacrylate, polystyrene, hydrogenated styrene butadiene styrene, polycarbonate, or mixtures thereof.
8. (Previously Amended) The golf ball of claim 1, wherein the ionomer comprises a copolymer of an olefin and an  $\alpha,\beta$ -ethylenically unsaturated mono- or di-carboxylic acid.

wherein the carboxylic acid groups are at least partially neutralized with at least one metal ion.

9. (Original) The golf ball claim 8, wherein the metal ion comprises zinc, sodium, magnesium, manganese, calcium, lithium, or potassium.

10. (Original) The golf ball of claim 1, wherein the polyamide polymer is selected from the group consisting of nylon 4, nylon 6, nylon 7, nylon 11, nylon 12, nylon 13, nylon 4,6, nylon 6,6, nylon 6,9, nylon 6,10, nylon 6,12, nylon 12,12, nylon 13,13, and mixtures thereof.

11. (Currently Amended) A golf ball comprising:

a core;

a cover comprising a non-ionomeric thermoplastic polymer material; and

an intermediate layer disposed between the core and the cover, wherein the

intermediate layer comprises a polymer composition comprising about 10 percent to about 80 percent of at least one ionomer and about 90 percent to about 20 percent of at least one polyamide polymer, with the proviso that the at least one polyamide polymer is not a block polyamide copolymer comprising main-chain polyether blocks.

12. (Original) The golf ball of claim 11, wherein the non-ionomeric thermoplastic polymer material comprises a functionalized polymer, a copolymer or functionalized copolymer, or mixtures thereof.

13. (Currently Amended) The golf ball of claim 11 ~~claim 12~~, wherein the non-ionomeric thermoplastic polymer material is selected from the group consisting of a polyamide, a polycarbonate, a poly(phenylene oxide), imidized amino group containing polymers, high impact polystyrene, polysulfone, poly(phenylene sulfide), reinforced engineering plastics, polytetrafluoroethylene, nonionic olefinic homopolymers, and nonionic olefinic copolymers.

14. (Previously Amended) The golf ball of claim 11, wherein the ionomer comprises a copolymer of an olefin and an  $\alpha,\beta$ -ethylenically unsaturated mono- or di-carboxylic acid.

wherein the carboxylic acid groups are at least partially neutralized with at least one metal ion.

15. (Original) The golf ball claim 14, wherein the metal ion comprises zinc, sodium, magnesium, manganese, calcium, lithium, or potassium.

16 - 21. (Canceled)

Please add the following new claims:

22. (New) A golf ball comprising:

a core;

a cover comprising a non-ionomeric polymer material; and

an intermediate layer disposed between the core and the cover, wherein the

intermediate layer comprises a polymer composition comprising about 10 percent to about 80 percent of at least one ionomer and about 90 percent to about 20 percent of at least one polyamide polymer, with the proviso that the at least one polyamide polymer is not a block polyamide copolymer comprising main-chain polyether blocks.

23. (New) The golf ball of claim 22, wherein the ionomer is present in an amount of about 15 percent to about 75 percent by weight of the polymer composition, and wherein the polyamide polymer is present in an amount of about 85 percent to about 25 percent by weight of the polymer composition.

24. (New) The golf ball of claim 22, wherein the at least one polyamide polymer is selected from the group consisting of polyamide homopolymers, polyamide copolymers, block polyamide copolymers, and mixtures thereof.

25. (New) The golf ball of claim 22, wherein the at least one ionomer comprises a copolymer of ethylene and about 5 percent to about 30 percent acrylic acid or methacrylic acid.

26. (New) The golf ball of claim 22, wherein the non-ionomeric polymer material comprises at least one thermoset polymer.



27. (New) The golf ball of claim 22, wherein the non-ionomeric polymer material comprises at least one thermoplastic polymer.